Biologists Study Fish Flush at Libby Dam

Biologists are using echo-sounders and giant nets to explore fish entrainment, or fish flush, through the penstocks of Libby Dam. Results of the study will help biologists link fisheries flow recommendations between Libby Reservoir, or Lake Koocanusa, and the Kootenai River downstream of Libby Dam.

Biologist Don Skaar notes that the study is not completed, but some results have been astounding. "During one period, 1,800 fish were sucked through one of the dam's five penstocks in just three hours," he said. Skaar acknowledged that fish are not sucked through the am penstocks at such a high rate at all flow levels or seasons. "That is probably close to a maximum figure," he said.

Skaar noted that preliminary results also show that most fish are flushed during hours of darkness, and nearly all the fish entrained are 5-7 inch kokanee. However, a recent sampling found an adult kokanee more than 14 inches long was flushed through the dam.

Biologists perform autopsies on all fish captured in sampling nets. Many fish are killed through decapitation, hemorrhaging and crushing from water pressure and turbine blades. "It's amaz-

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ing, but many fish survive the trip through the penstock, turbines, draft tubes and into the tailrace below the dam," said Skaar. He noted that a ko-

kanee population exists in the Kootenai River below the dam, presumably established by fish flushed through the dam penstocks.

The flushing of kokanee from the reservoir downstream carries a mix of positive and negative effects. "The entrainment of kokanee creates a supper table for large fish living in the first few miles of the river below the dam," said Skaar, noting that a world record rainbow weighing over 29 pounds had recently been caught there. "But the kokanee in the river could compete with smaller trout for space and food."

The fish flush could also mean positive and negative effects for the fish population in the reservoir. Some reduction of the numbers of kokanee in the reservoir could result in larger kokanee in the remaining population, but too much entrainment of fish could reduce kokanee numbers below desired levels.

The project, now in its second year, has been logistically challenging. "We had a lot of problems getting the sonar transducer to work properly in the penstock," said Skaar. He noted that a submarine had to be hired to check the condition of the trash racks on the upstream face of the dam before the racks could be raised.

Once the racks were raised by the U.S. Army Corps of Engineers' crane, the transducer was attached so it would point into the opening of the penstock. Experts in echo-sounding were consulted to interpret and calibrate the results.

Huge metal-frame nets, 15-20 feet long, are placed in the draft tubes every

two weeks to calibrate the sonar readings of fish being sucked into the penstocks. The nets are attached to a 5-ton frame and lowered into the draft tube



STUDYING FISH ENTRAPMENT at Libby Dam is Biologist Don Skaar. Studies are not complete, but some results are astounding, says Skaar.

with a heavy-duty crane. Biologists check the nets periodically during the night and following morning to determine the timing and magnitude of the fish flush. Biologists set vertical gill nets and use echo-sounders in the reservoir forebay to compare fish with fish information in the entrainment study.

"What we find out in this project will show us how to adjust the entrainment rate of fish through the dam penstocks," said Skaar. "We hope to be able to reduce the fish flush by changing the discharge pattern and selective withdrawal system."

Results of the study will be used to help balance flow and water level recommendations in the river and reservoir. The project, funded by the Bonneville Power Administration, is part of the Department's fisheries mitigation work under the Northwest Power Act and Northwest Power Planning Council.

The U.S. Army Corps of Engineers operates the dam and cooperates in the study.

New Era in State/Tribal Relations Has Begun

Shortly after I moved to Region One, the tribal/state bird hunting and fishing pact was signed by our Governor and the Chairman of the Confederated Salish and Kootenai Tribes. From the agreement, a seven-member board was created. The Advisory Board makes recommendations to the Fish, Wildlife and Parks Commission and the Tribal Council on seasons, licenses and other issues regarding bird hunting and fishing within the exterior boundaries of the reservation.

I was given a simple charge by former Region One supervisor, now Deputy Director, Al Elser: "Make it work." Armed with this clear guidance and little knowledge of tribal law or past discussions, we began a new era of state/tribal relations. What has ensued has been a very rewarding and challenging experience.

As the Department's liaison with the Board, I've worked closely with Board members and tribal staff. I have found a genuine willingness to work for the common good of the resource, and a willingness on everyone's part to accept compromise on tough issues. The are no egos getting in the way of maning important recommendations, and meetings are informative, informal and open.

The future is in the making, and winners or losers will ultimately be the sportsmen and sportswomen of Montana. I believe that we have a real winner here, and my staff and I are pleased to play a part in the process.

PROFILE: WARDEN RICK SCHOENING

Enforcement Officer Leads Unique Life

Rick Schoening leads a complex and unique life: he serves as a wildlife law enforcement officer, substitute biology teacher, little league coach, newspaper columnist, and trainer of champion Birmingham Roller pigeons. That's right, roller pigeons.

As a law enforcement officer, Rick Schoening also walks a unique line: he is a warden for the Department of Fish, Wildlife and Parks, and through cross-deputization, helps enforce regulations of the Confederated Salish and Kootenai Tribes. His duties are guided by the state/tribal agreement for the Flathead Indian Reservation, and the Board established by that agreement.

"The function of the Advisory Board has been excellent, from my perspective," said Schoening. "Every recommendation for fish and wildlife they have made has flown through the Fish, Wildlife and Parks Commission and the Tribal Council. Once it's been established as a regulation, I can make a difference. I'm the guy who enforces it."

Because of his cross-deputization, Schoening is the only non-tribal member on the reservation who can write tickets for fish and wildlife violations for members in tribal court.

Schoening and tribal wardens work together on wildlife law enforcement within the exterior boundaries of the reservation. "The tribal wardens are great; we work together well," said Schoening. "We all got into this business for the same reason: we love the outdoors and working with fish and wildlife."

The tribal wardens are led by Warden Sergeant Pablo Espinoza, Jr., a law enforcement officer with 15 years of experience. Espinoza echoes Schoening's comments about cooperation, and adds that the agreement has also worked well with the Department's Missoula-based wardens.

Schoening's area includes portions of Lake, Sanders, and Missoula counties. Much of his time is spent on water safety for Flathead Lake, Flathead River, Lake Mary Ronan and other water bodies, and as a result, water-related accidents in the area are rare. Bird hunting is also a big issue. "This area is the pheasant capitol of Region One," he noted. Schoening is also the falconry coordinator for the region.

As a certified teacher of secondary



COOPERATION is the key to coordinating state/tribal fish and game laws, agree Tribal Warden Sergeant Pablo Espinoza, Jr., and Rick Schoening. Schoening serves as a warden for MDFWP and, through cross-deputization, helps enforce tribal regulations as well.

level biology, Schoening occasionally takes a "teaching vacation" at the Polson Middle School. He noted that this is a good opportunity to meet kids and emphasize ethics in wildlife management. He also is active in area hunter education classes. "Education has always been important to me," he said. "Both my parents are teachers, and my wife, Carolyn, teaches in the Polson school system."

Schoening originally wanted to be a biologist, but decided he didn't want to attend graduate school. He became certified as a teacher, but went into wildlife law enforcement to work outside and to work with fish and wildlife.

If you spend much time with Schoening, the conversation will eventually turn to pigeons. "My pigeons do backward somersaults in flight at a rate of 11 revolutions per second," he noted. "Last year, my birds took second out of 41 competitors in the Rocky Mountain Fly Off."

A prolific writer, Schoening has published over 30 articles in national and international journals on the training, breeding, judging, and selection of pigeons. He has traveled all around the United States and to England judging in competitions. He will participate in next year's World Cup for roller pigeons.

"I have been intensely interested in pigeons for a long time," sai Schoening. "It's been an obsession, ever since I was three years old."

Schoening and his wife Carolyn live in Polson with son Brendeon, 12, and daughter Arden, 8.

Interview: Ralph Goode

State/Tribal Advisory Board Chairman

Confederated Salish and Kootenai Tribal member Ralph ode chairs the State/Tribal Advisory Board for the Flatnead Indian Reservation. The board's membership includes seven representatives, three appointed by the Tribal Council, three appointed by the Governor, and a member of the U.S. Fish and Wildlife Service. Board members include Carole McCrea, Fred Matt, Ron Skates, Rocky Gilleard, Rod Johnson (vice chairman), and Bob Lucas. Tena Savage serves as board secretary.

Goode is the Tribal Forestry Department head, supervising a permanent staff of 16, and many seasonal employees. He has worked for the Tribes and Bureau of Indian Affairs in forestry for more than 20 years. Goode lives in Ronan with his wife, Janice, and children Sue, 17, and Stan, 16.

EDITOR: The advisory board has been in place for about a year now. How would you describe its performance to date?

GOODE: I believe that we have made a real effort to listen to the public. All of our meetings have been open. After we take care of some board business, we ask members of the audience to introduce themselves and offer them the opportunity to speak if they have any additional issues they'd like us to consider. Then we consider each major issue, and listen to our technical committees' findings. We take additional public comment as we consider each issue, and we encourage media coverage of the process.

EDITOR: It sounds like the Board process is similar to that of the Fish, Wildlife and Parks Commission.

GOODE: I'm not sure if we've used that as a pattern or not. I do feel that the open meeting process allows us to reflect the concerns of the people.

EDITOR: How do the technical committees work? GOODE: There are four technical committees: Wildlife, Fisheries, Recreation, and Enforcement. Each committee consists of technical experts from the Department and Tribes. The committees advise us on the details of an issue. The committees have worked hard to meet our needs. The technical people have had previous good working relationships, and it sure shows when we call on them for information. This kind of process gives us what we need to make an informed decision.

EDITOR: Who brings the issues to the board?

GOODE: They can come from any direction. The technical committees, state, landowners, and Tribal Council have brought forward some issue. Issues are suggested by Board members who have been contacted by the public. Polson Outdoors, the sportsmen group, has been active. The Bison Range and others brought forward the weed issue.

EDITOR: What are some of the more difficult issues the Board has dealt with?

GOODE: The licensing issue, considering special costs of different age groups, that was challenging. Some of the regulations, steel shot and shooting hours, vary between reservation and off-reservation lands. In the fisheries area, we've had to make conscious efforts to look at what's best for the system rather than focusing on individual populations. Remember that we don't set regulations, we make recom-

mendations for the Tribal Council and the Fish, Wildlife and Parks Commission to adopt.

EDITOR: Has either body rejected any of the Board's recommendations?

GOODE: Not yet. They have questioned us on some points and asked us to explain our reasoning, but they haven't rejected any.

EDITOR: Why was this agreement and board process important to the Tribes?

GOODE: It allows the Tribes the authority to permit and license for hunting and fishing within the exterior reservation boundaries. I feel that non-tribal members living on the reservation are benefitted because they are now required to purchase only one license for the state.

It's not unusual to charge fees for hunting, fishing and other recreation. A lot of private landowners charge for hunting and fishing on their lands. Even the state has adopted that philosophy now with the state lands access fee for hunting and fishing. One thing that I want



RALPH GOODE, Board Chairman.

to make clear, though, is that if you want to boat or swim on the south half of Flathead Lake, there is no recreation fee. That is something we wanted to offer the public without cost. We've always provided this opportunity.

EDITOR: So you see the Tribes as a landowner charging a fee to fish or hunt, just like private landowners in eastern Montana charging to hunt deer or antelope on their land, or the state charging to fish or hunt on school trust lands?

GOODE: It's the same concept. Remember that the Tribes put back over a million dollars annually into the fish, wildlife and recreation program to manage the resource.

EDITOR: Do you get much time to hunt or fish?

GOODE: Yes. I'm an avid upland bird and waterfowl hunter, and I train my own laboradors. I'm a member of Ducks Unlimited and Pheasants Forever. I'm not a very good fisherman, and have not spent a lot of time at it. I always drown a few worms each year, catch a few trout or bass, but that's about the extent of it. I like to head into the Missions with my family from time to time.

EDITOR: What would you list as the best accomplishments of the Board to date?

GOODE: I think we've been successful in balancing the needs of the public. We certainly haven't met every request, and we certainly never will. No particular issue stands out, but we're pretty new. I'd like to think we're a can-do board; we're not afraid to take on controversial issues, and we hope to have a lot more success. I believe it's working, and I want people to know it's an open forum; please come and tell us what you think.

Angler Association Revamps Fishing Access Site

The fishing access site at the Old Steel Bridge on the east side of the Flathead River will soon be completed, thanks to the volunteer efforts of 10 members of the Flathead Fishing Association. The access site just east of Kalispell had been vandalized and mis-

used in the past because of the lack of vehicle control berms and guard rails. The vandalism was so bad that the site had to be closed.

"We felt that the site was very important to anglers in the valley," said Dave Minister, who coordinated the effort for the Fishing Association. "If you can't access this side of the river, it is hard to fish the deeper eddies of the pool below the Old Steel Bridge."

Minister credited Jack and Hugh McManus for picking up and transporting guard rails donated by the Montana Department of Highways. Roger Claridge of LHC, Inc. provided the road grader, and operator Jerry Crawford widened and shaped the access road and parking area.

Fishing Association members who donated work days on the site included:



VOLUNTEER WORKERS will soon complete the refurbished access site at the Old Steel Bridge. Lee Shepard, Dave Minister, Bob Anderson, Ken Kettinger and youth coordinator Kevin Fraley are some of the volunteers who have helped with the project.

Jay Crawford, Lee Shepard, Alfred Gardner, Vic Hundahl, Bob Anderson, Ken Kettinger, Bob LeDuc, Mark Disney, Frank Anderson, and Mitter. Merle Phillips of the Department of Fish, Wildlife and Parks provided equipment and design ideas, and with

Jim Vashro, coordinated efforts for the FWP.

The site will include some special features for easy access.

"One of the most important aspects of the project is access for people with disabilities," Minister said. "We've put in extra work to establish disabled parking spaces. Also, the site will be sloped so disabled people can reach the river to fish."

Minister estimated that Fishing Association members will have contributed 30 worker days by the end of the project. "It's been a lot of work, but definitely worth it," he said.

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